

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND**

MEDSENSE, LLC.
180 Salmon
Irvine, CA 92618

Plaintiff,

v.

UNIVERSITY SYSTEM OF MARYLAND
3300 Metzerott Road
Adelphi, MD 20783

Serve: Robert L. Caret
Chancellor
3300 Metzerott Road
Adelphi, MD 20783

UNIVERSITY OF MARYLAND
COLLEGE PARK
2101 Main Administration Building
College Park, MD 20742

Serve: Wallace D. Loh
President
2101 Main Administration
College Park, MD 20742

MIAO YU
606 Autumn Wind Way
Rockville, MD 20850

HYUNG DAE BAE
116 Hedgewood Drive
Greenbelt, MD 20770

Defendants.

**COMPLAINT FOR DAMAGES
(Jury Trial Requested)**

Case No: _____)

COMPLAINT AND JURY DEMAND

MedSense LLC (“Plaintiff”), by and through its undersigned counsel, hereby sues
Defendants, the University System of Maryland (“Defendant USM” or “USM”), the University

of Maryland College Park (“Defendant UM” or “UM”), Miao Yu (“Defendant Yu” or “Yu”), and Hyung Dae Bae (“Defendant Bae” or “Bae”, who with Defendant USM, Defendant UM and Defendant Yu are collectively, the “Defendants”), and in support thereof states as follows:

NATURE OF THE ACTION

1. This action arises from Defendants unauthorized disclosures and misappropriation of certain licensed materials and certain Plaintiff trade secrets and confidential information to third parties without Plaintiff’s consent, even though Plaintiff enjoyed a license for the exclusive use of the licensed technology, and owned the Plaintiff trade secrets and confidential information, and Defendants’ failure to disclose to Plaintiff certain funding that Defendants received through which Defendants misappropriated and improved upon the licensed technology unbeknownst and to the detriment of Plaintiff.

2. Through this action, MedSense seeks damages for its losses due to Defendants’ unlawful conduct and deception as well as further relief.

PARTIES

3. MedSense is a Delaware limited liability company with its principal place of business in Irvine, California. MedSense is in the business of design and manufacture of miniature fiber optic pressure and temperature sensors and sensor based systems and of provision of related services in the fields of medical applications and industrial applications.

4. Defendant USM is a body politic and corporate entity duly created under state law pursuant to §§ 12-102, *et seq.* of the Education Article of the Annotated Code of Maryland. It is composed of constituent organizations, through which it engages in technology and commercialization endeavors.

5. Defendant University of Maryland (“UM”), is a constituent institution of Defendant USM and houses the Office of Technology Commercialization, through which it negotiates and executes license agreements. At all times relevant to this Complaint, Defendant UM acted on its own behalf and on behalf of and for the benefit of Defendant USM.

6. Defendant Yu, sued individually and in her capacity as an employee of Defendant UM, is a resident of Maryland. Upon information and belief, Defendant Yu holds a Ph.D. in mechanical engineering and is a research scientist and professor of mechanical engineering, including, at UM, and her research interests include, among other things, optical sensors and smart materials and structures.

7. Defendant Bae, sued individually and in his former capacity as an employee of Defendant UM, is a resident of Maryland. Upon information and belief, Defendant Bae holds a Ph.D. in mechanical engineering and is a research scientist, including, previously at UM, and his research interests include, among other things, optical sensors, and polymer based nano fabrication. He is currently an assistant professor of mechanical engineering at Howard University.

JURISDICTION AND VENUE

8. This Court has jurisdiction over this Complaint and action pursuant to 28 U.S.C. §§ 1331 and 1332.

9. The amount in controversy exceeds \$75,000 exclusive of costs and interest.

10. Venue is proper within this district pursuant to 28 U.S.C. § 1391 in that Defendant USM and Defendant UM conduct business here and are subject to personal jurisdiction in this district. Defendant Yu and Defendant Bae both reside in Maryland and are

subject to personal jurisdiction in this district. Furthermore, a substantial part of the events giving rise to MedSense's claims occurred within this district.

FACTUAL ALLEGATIONS

11. The University of Maryland and an entity named MedSense Technologies, LLC - a Delaware limited liability company and Plaintiff's predecessor-in-interest - entered into an Exclusive Licensing Agreement, on or about March 15, 2010, as amended from time to time ("Agreement"), whereby Defendant UM provided to Plaintiff a worldwide, exclusive right and license under and to certain licensed inventions and certain patent rights to make, have made, use, sell, have sold and offer for sale certain licensed products, services, and processes. The Agreement is attached hereto and incorporated herein as Exhibit A.¹

12. Plaintiff is the successor entity to MedSense Technologies, LLC, whose members were Stephen Kohn and Angela Kohn. On or about July 2013, the members of MedSense Technologies LLC contributed and transferred the assets of MedSense Technologies, LLC to Plaintiff in exchange for equity interests in Plaintiff, and transferred the Agreement with the consent, and at the request of, Defendant UM.

13. Prior to entering into the Agreement, Defendant UM provided a personal viewing and demonstration of the technology to be licensed to Stephen Kohn and Angela Kohn, and assured them that the miniature fiber optic sensor technology was state-of-the-art and ready for commercialization.

14. Stephen Kohn and Angela Kohn are the primary contributors to Plaintiff of medical expertise and experience to the commercialization of the fiber optic sensors. Stephen Kohn earned a Bachelor of Science in Sports Medicine with Special Studies in Exercise

¹ The parties amended and superseded the initial March 15, 2010 agreement in 2012, 2013, 2015, and 2016.

Physiology/Kinesiology, and a Doctorate in Naprapathic Medicine. Dr. Kohn has over 10 years of experience in spine care, sports injuries, and rehabilitation. His medical expertise ranges from the Oakley Smith Spine Manipulation Techniques to Lymphatic Drainage to Sports Medicine Rehabilitation Modalities Protocol for Work Hardening Patients. Angela Kohn is a registered nurse and her medical experience includes maximizing efficiency of nursing care processes, conducting performance management, and dispensing quality assurance and supervisory functions.

15. The licensed inventions under the Agreement relate to ultra-miniature fiber optic sensors, as further defined below:

University of Maryland Intellectual Property Disclosures PS-2009-085 “Surface Mountable Ultra-Miniature Fiber-Optic Pressure Sensor,” IS-2012-047 “Optical Interrogation Program for Fiber-Optic Pressure Sensors Based on LabVIEW,” and PS-2012-061 “Smart Multifunctional Optical System-on-a-Chip Sensor Platform and Optical Wireless Sensor Network Node,” and PS-2015-080 “Distributed Fiber Optic Multi-Parameter Sensors using UV molded Process.”

16. The patent rights under the Agreement included the following US patents and patent applications, and all divisional, continuations, continuations-in-part, substitutions, renewals, reissues, and extensions claiming priority therefrom in the United States and any foreign countries:

- US Patent Application Serial No. 61/230,899 entitled “Surface Mountable Ultra-Miniature Fiber Optic Pressure Sensor” filed on August 3, 2009 (provisional patent application with University of Maryland Ref. PS-2009-85);

- US Patent Application Serial No. 12/849,436 entitled “Ultra-Miniature Fiber Optic Pressure Sensor System and Method of Fabrication” filed August 3, 2010 (non-provisional patent application);
- US Patent Application Serial No. 13/440,139 entitled “Ultra-Miniature Fiber Optic Pressure Sensor System and Method of Fabrication” filed April 5, 2012 (continuation-in-part patent application);
- US Patent No. 8,151,648 entitled “Ultra-Miniature Fiber Optic Pressure Sensor System and Method of Fabrication” issued on April 10, 2012, after examination of its corresponding US Patent Application Serial No. 12/849,436; and
- US Patent Application Serial No. 61/657,293 entitled “Smart Multifunctional Optical System on a Chip Sensor Platform and Optical Wireless Sensor Network Node” filed June 8, 2012 (provisional patent application with University of Maryland Ref. PS-2012-061, but no non-provisional patent application was subsequently filed).

17. The field of use of the exclusive license grant under the Agreement included all medical applications and all industrial applications.

18. As a result of the exclusive nature of the license obtained by Plaintiff, certain licensor information and licensed processes would not be disclosed in the patents and patent applications, and accordingly, such licensor information and licensed processes would only be valuable under such exclusive license if they remained confidential. Accordingly, a duty of confidentiality existed between the Plaintiff and the Defendants in connection with such licensor information and licensed processes.

19. Because no non-provisional patent application was subsequently filed in connection with the above US Patent Application Serial No. 61/657,293 entitled “Smart Multifunctional Optical System on a Chip Sensor Platform and Optical Wireless Sensor Network Node,” this licensed invention was not published via the US Patent & Trademark Office and remained confidential.

20. After the Agreement was signed in March 2010, Plaintiff discovered that Defendants had not yet developed a working sensor, proof of concept, or prototype for the licensed technology. In fact, and contrary to the express representations of Defendants, the licensed inventions, the licensor information, and the patent rights were far from state-of-the-art or ready for commercialization.

21. As a result, Plaintiff began working with Defendant Yu, and Defendant Bae, both scientists employed by Defendant UM, who developed the licensed technology, to make the first sensor as a working proof of concept and prototype of the licensed technology.

22. On or about January 2012, Defendants Yu and Bae failed to produce any working proof of concept or prototype. Defendant Yu then suggested to Plaintiff that it outsource the engineering to a MEMS lab.

23. Throughout the course of their development efforts leading into January 2012, Plaintiff and Defendants recognized the licensed technology had several major issues. One issue was that the pressure measurements suffered from a temperature drift that made the pressure measurements inaccurate. Another issue was that the sensor suffered from a water absorption issue. Another issue was that the fabrication process was not yet developed.

24. Consequently, on or about April 2012, Plaintiff outsourced the manufacturing of a prototype for the licensed technology to the Washington State University MEMS Lab. Plaintiff

paid Washington State University approximately \$16,500 for its efforts. At the MEMS Lab, however, development of the prototype of the sensor technology was more challenging than expected, and ultimately unsuccessful. However, Plaintiff gained knowledge, experience and know-how in manufacturing the fiber optic sensor and about how not to manufacture the sensor. Defendants Yu and Bae worked with Plaintiff to periodically review the efforts by Washington State University, and had access to such knowledge, experience and know-how.

25. In early 2013, after failing to produce a working proof of concept and prototype at the Washington State University MEMS Lab, Plaintiff went back to Defendant UM to outline a new strategy going forward. Plaintiff spoke with the University of Maryland Office of Technology Commercialization (“OTC”) members Felicia Metz, George Letscher and Dr. Gayatri Varma. The OTC officers proposed working more closely with Defendants Yu and Bae, now taking on the additional responsibility to facilitate the commercialization of the licensed technology, specifically in the development of the working proof of concept, prototype and the batch manufacturing process. The Parties agreed (i) Stephen Kohn and Angela Kohn would form a new entity which would be contributed the rights and obligations of MedSense Technologies, LLC in the Agreement, (ii) the Defendants, together with certain other individuals, would be granted equity interests in the newly formed entity, and (iii) Defendants’ contribution to this new entity would include, *inter alia*, their work in such commercialization of the licensed technology.

26. Accordingly, on or about July 29, 2013, Stephen Kohn and Angela Kohn caused MedSense, LLC to be formed in the State of Delaware.

27. Plaintiff and Defendant UM subsequently amended the Agreement effective on July 31, 2013, incorporating the following key changes: (i) the annual royalty was increased from 7% to 9.5%, (ii) UM, Yu, Bae, Xuming Zhang, Cheng Pang, James Wong and others were

each granted equity interests in Plaintiff in exchange for their contribution of their work, and (iii) the scope of the exclusive license was expanded to include industrial applications of the licensed technology.

28. In order to help facilitate this transition, and to develop a working proof of concept, prototype and batch manufacturing process that could be replicated and further developed for commercialization, the Parties applied for and received three state grants, specifically, TEDCO Phase I Grant, MIPS Phase I Grant, and the TEDCO Phase III Grant.

The TEDCO Phase I Grant

29. The TEDCO Phase I Grant was awarded on or about August 2013. The grant amount was \$100,000. The proposal for the TEDCO Phase I Grant discussed the fiber optic sensor, the means of correcting for temperature drift, and the batch fabrication process. The proposal states that proposed sensor employs a novel multi-sensing cavity design which will allow for self-temperature compensation as well as simultaneous pressure and temperature measurements, rendering a sensor with “literally”² no thermal drift. Defendant Yu led the efforts of the TEDCO Phase I grant. This effort was a continuation of the work by Washington State University and utilized knowledge, experience and know-how therein.

The MIPS Grant

30. The MIPS Grant was awarded on March 15, 2014. In order to secure the MIPS grant, the Parties entered into a MIPS Partnerships Agreement dated August 1, 2014. Plaintiff paid Defendant UM an additional \$10,000 cash contribution to secure the research funding.

31. Section 6.1 of the MIPS Partnerships Agreement states that intellectual property developed solely by one party belongs to such party, while technology that is jointly developed

² As stated by Defendant Yu in the TEDCO Phase I grant proposal.

will be jointly owned. However, any rights gained by the Defendants were contributed to Plaintiff in exchange for the equity interests in Plaintiff granted to Defendants.

32. Section 5 of the MIPS Partnerships Agreement sets forth the confidentiality provisions for protection of each party's confidential information that may be disclosed under the Agreement. Section 5.1 of the MIPS Partnership Agreement defines Confidential Information as "including but not limited to scientific knowledge, know-how, processes, inventions, techniques, formulae, products, data, plans and software that is not generally known to the public and that, if tangible, is designated by the disclosing party as Confidential Information at the time of disclosure and that, if oral, is summarized and identified as Confidential Information by the disclosing party in a writing submitted to the receiving party within thirty (30) days of the initial disclosure." Section 5.3 states "[a] receiving party will use reasonable efforts to prevent the disclosure of the other party's Confidential Information to third parties, or use of Confidential Information for any purpose other than as contemplated by the Project, without the prior written consent of the disclosing party, for a period of three (3) years after the expiration of this Agreement." Plaintiff disclosed its confidential information including, without limitation, the information concerning the efforts by the Washington State University MEMS labs and expected that such confidential information would be protected under the MIPS Partnerships Agreement.

33. The final report for the MIPS was submitted on June 18, 2015. Despite Plaintiff's continual requests, the final report and the deliverables, specifically, a high speed optical box capable of interpreting the data off of the sensor technology, was not delivered to Plaintiff.

34. Plaintiff moved the manufacturing of a prototype sensor technology to the University of Maryland's Technology Advancement Program Building complex. On or about August 11, 2014, Plaintiff and University of Maryland formally entered into a TAP License

Agreement whereby Plaintiff would license use of certain space at the University of Maryland's Technology Advancement Program Building complex. Section 14 of the TAP License Agreement addressed intellectual property rights and stated in part "Any information, technology or products developed solely by the Licensee in the Licensed Space will be the sole property of the Licensee, and University employees and agents shall have no rights in or claims to such technology or products as a result of this Agreement." However, any rights gained by the Defendants were contributed to Plaintiff in exchange for the equity interests in Plaintiff granted to Defendants.

The TEDCO Phase III Grant

35. The TEDCO Phase III State Grant was approved on March 13, 2014. Plaintiff was granted \$100,000 to be used to develop batch manufacturing processes for the fiber optic sensor. The grant project took one year and was completed on March 13, 2015. The TEDCO Phase III Grant states that Defendants Yu and Bae were successfully able to engineer a batch fabrication process to mass produce 400 of the licensed sensors. Plaintiff owns the technology developed under the TEDCO Phase III grant. The TEDCO Phase III funds were provided directly to Plaintiff who then engaged Defendant UM to perform its efforts. Any rights gained by the Defendants were contributed to Plaintiff in exchange for the equity interests in Plaintiff granted to Defendants. Moreover, Defendants Yu and Bae began submitting publications directly related to the licensed inventions, the licensed processes, and licensor information in the Agreement without disclosing those publications to Plaintiff in advance of their publication.

Defendants Include the Licensed Technology in Publications Without Adhering to Notice and Consent Requirements of the Agreement

36. On or about June 2012, Defendants Yu and Bae published an article entitled "Miniature Fabry-Perot Pressure Sensor Created Using UV-molding Process with an Optical

Fiber based Mold” in Optics Express, Vol. 20, No. 13, which describes the all polymer fiber optic sensor design and manufacturing process, that disclosed trade secrets and confidential information of Plaintiff. Such know-how was Plaintiff’s trade secret and confidential information, and while it was protected confidential information, such method was disclosed in the article without approval from Plaintiff.

37. On April 14, 2014, Defendants Yu and Bae, published an article entitled “Hybrid Miniature Fabry–Perot Sensor with Dual Optical Cavities for Simultaneous Pressure and Temperature measurements” in the Journal of Lightwave Technology 32 (8), 1585-1593, which describes that a significant drawback of the all polymer miniature fiber optic pressure sensor is high temperature sensitivity. Such article then describes a dual cavity sensor Fabry-Perot sensor with built-in temperature measurements and compensation capability and the method of temperature stabilization for the fiber optic sensor technology, that disclosed trade secrets and confidential information of Plaintiff. Such know-how was Plaintiff’s trade secret and confidential information, and while it was protected confidential information, such method was disclosed in the article without approval from Plaintiff.

38. Section 9.01 of the Agreement specifically requires Defendant UM give prior written notice to Plaintiff of any publication related to the Agreement and provides for a 30 day review period to identify any Plaintiff trade secret and confidential information in the applicable publication. Upon such identification, Plaintiff has the option of having the confidential information removed from the article. No such notice was given.

39. Defendants Yu and Bae had each received an equity interest in Plaintiff in exchange for, among other things, their work in development of the working proof of concept, prototype and the batch manufacturing process. Despite owning an equity interest in Plaintiff,

Defendants published the Plaintiff's confidential information to the detriment of Plaintiff. Pursuant to Plaintiff's grant of equity interest to Defendants, a confidential relationship of trust was established between Defendants and Plaintiff, and Defendants were bound to maintain such confidentiality.

40. On September 23, 2013, Bae, Yu and Cheng Pang published an article entitled "MEMS Fabry-Perot Sensor Interrogated by Optical System-on-a-Chip for Simultaneous Pressure and Temperature Sensing" in Optics Express, Vol. 21, No. 19, which describes an optical system-on-a-chip interrogator for pressure and temperature sensing. The article disclosed in part the licensed technology of US Patent Application Serial No. 61/657,293 entitled "Smart Multifunctional Optical System on a Chip Sensor Platform and Optical Wireless Sensor Network Node" which was never published and is deemed confidential information.

41. Thereafter, Plaintiff engaged Defendant Bae on a part-time basis with the role of research engineer to complete the development of the proof of concept, prototype and batch manufacturing process of the licensed technology. Defendant Bae was engaged by the Plaintiff from January 1, 2015 to May 2016, and during such time, he continued his employment with Defendant UM. Defendant Bae signed a non-disclosure agreement with the Plaintiff on or about April, 2017.

42. Plaintiff also engaged David Yun, Jr., who was Defendant Bae's intern, on a part-time basis to support development of the proof of concept, prototype and batch manufacturing process of the licensed technology. Yun was engaged by Plaintiff from October 2015 to February 2017, and during such time, he was a student at Defendant UM. Yun signed a non-disclosure agreement with the Plaintiff on or about April, 2017.

43. Plaintiff also engaged Joseph Forbes, who was Bae's intern, on a part-time basis to support development of the proof of concept, prototype and batch manufacturing process of the licensed technology. Forbes was engaged by Plaintiff from October 2015 to June 2016, and during such time, he was a student at Defendant UM. Forbes signed a non-disclosure agreement with the Plaintiff on or about April, 2017.

44. Plaintiff also engaged Jacob Park on a part-time basis to support development of the proof of concept, prototype and batch manufacturing process of the licensed technology. Park was engaged by Plaintiff from April 2015 to May 2017, and during such time, he was a student at Defendant UM.

45. On March 3, 2015, US Patent No. 8,966,988 entitled "Ultra-Miniature Fiber Optic Pressure Sensor System and Method of Fabrication" was issued, after examination of its corresponding US Patent Application Serial No. 13/440,139. This patent became a part of the licensed patent rights under the Agreement. The issued patent states that the invention involves a miniature fiber optic sensor which may be used as a miniature microphone.

46. In 2015, Defendants Yu and Bae published another article entitled "On-Fiber Plasmonic Interferometer for Multi-Parameter Sensing" in Optics Express 23(8), 10732-10740 in which they disclosed confidential information of Plaintiff.

47. Once again, Defendant UM failed to give written notice of such publication under Section 9.01 of the Agreement, depriving Plaintiff of its right to identify and remove its trade secrets and confidential information in the applicable publication.

48. As a result of the various issues and delays, the Agreement was further amended effective August 18, 2016 to extend the date to June 30, 2018 for conversion from exclusive to non-exclusive if the Plaintiff had not yet sold licensed products and/or services.

49. On June 27, 2016, Defendants Yu and Bae published another article entitled “Low cost, high performance white-light fiber-optic hydrophone system with a trackable working point” in Optics Express 24 (17), 19008-19019, which related an industrial application for sensor technology that disclosed trade secrets and confidential information of Plaintiff. The article states that Fabry-Perot hydrophones suffer from working point drift, due to pressure and temperature changes and water absorption of the gap material. The method to correct the working point drift that results from water absorption of certain gap material was Plaintiff’s trade secret and confidential information, and yet it was disclosed in the article without approval from Plaintiff.

50. Co-authors of this article included several individuals, specifically, Jinyu Ma, Meirong Zhao, and Xingjing Huang, all of whom were employed by Tianjin University in Tianjin, China. Such co-authors are listed prior to Defendants Yu and Bae.

51. Yet, Section 2.03 of the Agreement reserves for Defendant UM and its employees, officers, agents and students only certain rights specifically: “the right to use the Licensed Inventions, Licensor Information and Patent Rights for i) obtaining funding from any source for additional research, ii) research, iii) teaching, iv) noncommercial purposes, and v) to allow other non-profit entities in the United States to use the licensed inventions solely in support of their internal, noncommercial research.” No reservation of rights was made for non-profit entities or commercial entities outside the United States to use the licensed inventions, licensed information, or the patent rights.

52. Once again, Defendant UM failed to give written notice of such publication under Section 9.01 of the Agreement, depriving Plaintiff of its right to identify and remove its trade secrets and confidential information in the applicable publication. Plaintiff’s other option under

Section 9.01 of the Agreement would have been to seek patent protection for the licensed technology in China. Plaintiff did not have the opportunity to do so.

53. Furthermore, the above article cites that the technology was funded in part by the Special Project of National Key Scientific Equipment Development of China, 2013YQ03091503. No reservation was made under the Agreement for commercial purposes anywhere in the world.

54. Defendants Yu and Bae published other articles that related to fiber optic sensor technology for medical applications and industrial applications. Defendant UM did not give notice to Plaintiff as required under the Agreement. Periodically during the term of the relationship, Defendants applied for and obtained other grants for work related to the licensed technology and to the resolution of the issues with the licensed technology. Defendants did not disclose such efforts and results to Plaintiff to Plaintiff's detriment.

Defendants Continue to Act Contrary to Terms of the Agreement

55. Meanwhile, after the final report for the TEDCO Phase III grant was issued, Plaintiff was under the reasonable belief that they had 400 working sensors and started to spend considerable time, money, and resources to bring on a manufacturing partner so that they could replicate and commercialize the sensor technology. However, Defendants failed to and never delivered to Plaintiff even one of the 400 sensors, despite repeated requests from Plaintiff.

56. Relying on the success reported by Defendants under the TEDCO Phase III grant, Plaintiff engaged Control Cable, Inc., and was preparing to begin manufacturing the sensors.

57. In June 2016, Defendant Bae along with fellow researchers David Yun, Joseph Forbes, and Jacob Park came over to the Control Cable manufacturing plant to help implement the production and fabrication process of the licensed sensors, however, despite the claims and findings in the TEDCO Phase III grant that Defendants Yu and Bae, had figured out a way to

mass produce the licensed sensor technology, Defendant Bae was unable to replicate that mass production at the Control Cable manufacturing plant. Defendant Bae, Yun and Forbes were engaged by Control Cable and were paid for their services. In October 2016, Defendant Bae left the team, and took a position at Howard University.

58. On January 15, 2017, Plaintiff was finally given the MIPS Grant Final Report and the deliverables, specifically, a high optical box capable of reading and interpreting the data off of the sensor technology.

59. On or about February 1, 2017, Defendant UM forwarded to Plaintiff an inquiry regarding the licensed inventions from Boston Scientific. Plaintiff followed up on the inquiry but the licensed technology was not yet ready for production.

60. Subsequently, Plaintiff discovered Defendants had disclosed Plaintiff's proprietary and confidential information without Plaintiff's authorization.

61. The Agreement remains in full force and effect until on or about 2030 because provision 10.01 of the Agreement provides: "This Agreement shall become effective on the Effective Date and, unless sooner terminated in accordance with the provision herein, shall remain in full force and effect. Notwithstanding the above, this License will terminate upon the expiration of an issued patent or fifteen years from the first payment of a royalty under Article 7.03, whichever is later."

FIRST CAUSE OF ACTION
(Breach of Contract)
(Plaintiff v. Defendant USM and Defendant UM)

62. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as if fully set forth herein.

63. On July 31, 2013, Plaintiff and Defendant UM amended their valid and legally binding Exclusive Licensing Agreement.

64. Pursuant to provision 2.01 of the Agreement.

LICENSOR hereby grants, except for certain rights which may be held by the United States Government, to LICENSEE and its Associates, and LICENSEE hereby accepts from LICENSOR, as of the Effective Date of this Agreement, the exclusive, nontransferable, nonassignable right and license to and under the Licensed Invention and Patent Rights to make, have made use, sell, have sold and offer for sale, the Licensed Product(s); and make, have made, use, sell, have sold and offer for sale the Licensed Process(es) or Licensed Service(s) in the Field within the Territory. This Grant DOES NOT include the right to sub-license or cross-license the Licensed Invention or Patent Rights.

65. Pursuant to provision 1.02-1.05 of the Agreement, Defendant was to provide Plaintiff with an exclusive license of all inventions, information, and process related to:

University of Maryland Intellectual Property Disclosures PS-2009-085 “Surface Mountable Ultra-Miniature Fiber-Optic Pressure Sensor,” IS-2012-047 “Optical Interrogation Program for Fiber-Optic Pressure Sensors Based on LabVIEW,” PS-2012-061 “Smart Multifunctional Optical System-on-a-Chip Sensor Platform and Optical Wireless Sensor Network Node,” and PS-2015-080 “Distributed Fiber Optic Multi-Parameter Sensors using UV molded Process.”

66. Pursuant to provision 1.06 of the Agreement, field included all “MEDICAL APPLICATIONS and INDUSTRIAL APPLICATIONS”.

67. Moreover, pursuant to provision 9.01 of the Agreement, as stated in relevant part, Defendant “shall provide LICENSEE, at least thirty (30) days prior to publication or presentation, a copy of the abstract, paper or manuscript for review and comment. Licensee’s review shall be limited to a determination of whether any Proprietary or Confidential Information, as identified by the publication and whether LICENSEE desires to have such

information deleted or to seek patent protection for the information prior to publication.” (Emphasis Added).

68. As a result of the exclusive nature of the license granted by Defendant UM, certain licensor information and licensed processes would not be disclosed in the patents and patent applications, and accordingly, such licensor information and licensed processes would only be valuable under such exclusive license if they remained confidential.

69. Section 5.1 of the MIPS Partnership Agreement defines Confidential Information as “including but not limited to scientific knowledge, know-how, processes, inventions, techniques, formulae, products, data, plans and software that is not generally known to the public and that, if tangible, is designated by the disclosing party as Confidential Information at the time of disclosure and that, if oral, is summarized and identified as Confidential Information by the disclosing party in a writing submitted to the receiving party within thirty (30) days of the initial disclosure.” Section 5.3 states “[a] receiving party will use reasonable efforts to prevent the disclosure of the other party’s Confidential Information to third parties, or use of Confidential Information for any purpose other than as contemplated by the Project, without the prior written consent of the disclosing party, for a period of three (3) years after the expiration of this Agreement.”

70. During the life of the Agreement, Defendants and agents of Defendant UM did in fact publish articles where such articles directly referenced scientific knowledge, know-how, processes, inventions, techniques, formulae, products, data, plans and software that are not generally known to the public without ever providing disclosure to Plaintiff, and in violation of Plaintiff’s Agreement with Defendant. For instance, as alleged above, Defendants published articles (a) describing a dual cavity sensor Fabry-Perot sensor with built-in temperature

measurements and compensation capability and the a method of temperature stabilization for the fiber optic sensor technology; (b) disclosing in part the licensed technology of US Patent Application Serial No. 61/657,293 entitled “Smart Multifunctional Optical System on a Chip Sensor Platform and Optical Wireless Sensor Network Node” which was never published and is deemed confidential information; (c) disclosing polymer fiber optic sensor manufacturing processes; and (d) disclosing the means of correcting the issues due to working point drift, due to pressure and temperature changes and water absorption for the gap material that Fabry-Perot hydrophones suffered.

71. By failing to provide, “at least thirty (30) days prior to publication or presentation, a copy of the abstract, paper or manuscript for review and comment” as required by Section 9.01 of the Agreement, Defendant UM deprived Plaintiff of the opportunity to review the foregoing materials, determine whether they contain Proprietary or Confidential Information, and seek to have any such materials deleted or seek patent protection of such materials prior to publication, as is Plaintiff’s right as stated in Section 9.01 of the Agreement.

72. Further, as a direct result of Defendant UM’s failure to disclose to Plaintiff the publications, Defendant UM was allowed to take proprietary and confidential information outside of the United States to China, in which, Tianjin University and certain Chinese nationals were given access to trade secrets and confidential information.

73. Moreover, as a direct result of Defendant UM’s failure to disclose to Plaintiff the publications, Defendant UM disclosed trade secrets and confidential information related to the licensed technology.

74. By failing to make the foregoing disclosures and disclosing trade secrets and confidential information, Defendant UM violated Section 2.01 of the Agreement.

75. In every contract, including the Agreement, there is an implied covenant of good faith and fair dealing. Defendant UM breached the implied covenant of good faith and fair dealing when they: (i) failed to disclose to Plaintiff the publications, (ii) disclosed trade secrets and confidential information related to the licensed technology without Plaintiff's knowledge or consent, and (iii) otherwise prevented Plaintiff from realizing its expected benefits flowing from the Agreement.

76. As a direct cause of Defendant UM's breach of contract, Plaintiff suffered severe and irreparable harm to the value of the exclusively licensed technology because proprietary and confidential information was published and disclosed, and because that Plaintiff was not allowed to seek patent protection in jurisdictions not protected by United States patent laws.

WHEREFORE, Plaintiff prays for the relief stated below.

SECOND CAUSE OF ACTION
(Intentional Misrepresentation - Inducement)
(Plaintiff v. All Defendants)

77. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as if fully set forth herein.

78. Defendants asserted false representations of material fact to the Plaintiff in inducing them to enter into agreements.

79. Defendant UM provided a personal viewing and demonstration of the technology to be licensed to Stephen Kohn and Angela Kohn of Plaintiff, and Defendants represented and assured them that the miniature fiber optic sensor technology was state-of-the-art and ready for commercialization.

80. Defendants further represented that they would provide Plaintiff with their work developed under the TEDCO grants and the MIPS grant in exchange for the equity interests in Plaintiff granted to Defendants.

81. Defendants further represented that they were successfully able to engineer a batch fabrication process to mass produce 400 of the licensed sensors.

82. Defendants further represented that they had no additional work related to the licensed technology and to resolution of the issues with the licensed technology.

83. The foregoing representations were false. The falsity of the representations was known to Defendants or the misrepresentations were made with such reckless indifference to truth to impute knowledge to the Defendants.

84. The purpose of those misrepresentations was to fraudulent induce Plaintiff to enter into the Agreement, the TAPS License Agreement, the MIPS Partnership Agreement and the other agreements above so that Plaintiff would continue to fund efforts related to the licensed invention.

85. Plaintiff relied on the foregoing misrepresentations in entering into the foregoing agreements.

86. Plaintiff had the right to rely upon the foregoing misrepresentations with full belief of its truth, and Plaintiff would not have entered into the foregoing agreements, expended funds to further develop the licensed technology, or extended equity to Defendants had the misrepresentations not been made. Plaintiff reasonably believed that Defendant UM desired to contract with Plaintiff so that Plaintiff would develop the licensed technology for the mutual benefit of the Parties. Had Plaintiff been aware of these non-disclosures and concealments about

the non-operational sensors, Plaintiff would not have proceeded spending valuable time and resources related to manufacturing the sensors.

87. Plaintiff suffered damage directly resulting from the foregoing misrepresentations by continuing to fund efforts related to the licensed invention and technology under false pretenses, to the detriment of Plaintiff.

88. As a direct and proximate result of Defendants' non-disclosures and concealments, Plaintiff was never able to adequately develop, produce, or commercialize the licensed sensor technology. As a direct and proximate result, Plaintiff suffered present and future losses and lost profits.

WHEREFORE, Plaintiff prays for the relief stated below.

THIRD CAUSE OF ACTION
(Negligent Misrepresentation)
(Plaintiff v. All Defendants)

89. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as if fully set forth herein.

90. Defendant UM provided a personal viewing and demonstration of the technology to be licensed to Stephen Kohn and Angela Kohn of Plaintiff, and Defendants represented and assured them that the miniature fiber optic sensor technology was state-of-the-art and ready for commercialization.

91. Defendants further represented that they would provide Plaintiff with their work developed under the TEDCO grants and the MIPS grant in exchange for the equity interests in Plaintiff granted to Defendants.

92. Defendants further represented that they were successfully able to engineer a batch fabrication process to mass produce 400 of the licensed sensors.

93. Defendants further represented that they had no additional work related to the licensed technology and to resolution of the issues with the licensed technology.

94. Plaintiff relied on the foregoing negligent misrepresentations in entering into the foregoing agreements.

95. Plaintiff justifiably relied on those misrepresentations to their detriment. Plaintiff would not have entered into the foregoing agreements, expended funds to further develop the licensed technology, or extended equity to Defendants had the misrepresentations not been made. Had Plaintiff been aware of these non-disclosures and concealments about the non-operational sensors, Plaintiff would not have proceeded spending valuable time and resources related to manufacturing the sensors

96. As a proximate cause of Defendants' negligence, Plaintiff suffered present and future losses and lost profits.

FOURTH CAUSE OF ACTION
(Constructive Fraud)
(Plaintiff v. All Defendants)

97. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as if fully set forth herein.

98. Plaintiff and Defendants were in a confidential relationship, in which Defendants exercised dominion or influence over Plaintiff by having access or control over knowledge and information pertaining to the licensed technology, by having the ability to obtain the same, and by having control over whether the same was disclosed to Plaintiff.

99. Plaintiff had no reasonable choice but to trust that Defendants (i) would accurately disclose to Plaintiff the status of the licensed technology both before entering the Agreement and throughout their performance in furtherance of the Agreement, (ii) would not

disclose to third-parties such information and materials before Plaintiff spent millions of dollars and substantial time in developing the licensed technology, and (iii) would accurately disclose the status and results of the development of the batch manufacturing process. As a result of their relationship and Defendants' unique control over the licensed technology, Plaintiff relied upon Defendants to disclose to Plaintiff any such information, which Defendant failed to do.

100. Defendant violated the foregoing confidential relationship to Plaintiff's detriment by intentionally misrepresenting to Plaintiff that Defendants had no additional disclosures of know-how, processes, inventions, techniques, formulae, products, data, plan, improvements, and software pertaining to development of the licensed technology to make to Plaintiff.

101. Defendants violated those duties by failing to engage in good faith, fair dealing, best efforts and ensuring that all disclosures of know-how, processes, inventions, techniques, formulae, products, data, plan, improvements, and software pertaining to development of the licensed technology were made to Plaintiff.

102. This conduct further injures the public interest. The actions of the Defendants are especially egregious because they were in a position of great trust and confidence given the relationship of the Parties.

103. Defendants breached their duty intentionally, with malice, and/or with reckless disregard for Plaintiff by underthinking the actions, inactions, representation, misrepresentation, and concealment enumerated herein.

104. As a direct and proximate result of Defendants' constructive fraud, Plaintiff suffered damages.

WHEREFORE, Plaintiff prays for the below relief.

FIFTH CAUSE OF ACTION
(Declaratory Judgment Pursuant to 28 U.S.C. § 2201 *et seq.*)
(Plaintiff v. All Defendants)

105. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as if fully set forth herein.

106. A substantial controversy exists between the Parties, who have adverse legal interests in which Defendants have fraudulently and negligently induced Plaintiff into entering into the foregoing agreements and breached the foregoing agreements, and disclosed and continues to disclose licensed technology, thereby causing Plaintiff to suffer damages, as alleged above,

107. The foregoing substantial controversy is of sufficient immediacy and reality to warrant the issuance of a declaratory judgment because Defendants have deprived and continue to deprive Plaintiff of its right to its exclusive use of the licensed materials.

WHEREFORE, Plaintiff prays for the relief stated below.

SIXTH CAUSE OF ACTION
(Misappropriation of Trade Secrets Pursuant to 18 U.S.C. § 1836)
(Plaintiff v. All Defendants)

108. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as though fully stated herein.

109. The scientific knowledge, know-how, processes, inventions, techniques, formulae, products, data, plans and software pertaining to the development of the licensed inventions and technology are “trade secrets” as defined in 18 U.S.C. § 1839(3).

110. The foregoing trade secrets are related to a product or service used in, or intended for use in, interstate or foreign commerce, as the licensed inventions and technology under the Agreement, and as further developed under the TEDCO grants, MIPS grant, and agreement with

the Washington State University MEMS Lab were related to miniature fiber optic sensors, as defined in the Agreement, that Plaintiff intended to market interstate and abroad.

111. Plaintiff is the owner of the trade secrets as it enjoyed a license to the exclusive use of the trade secrets pursuant to the Agreement and the TEDCO grants, MIPS grant, and agreement with the Washington State University MEMS Lab.

112. Plaintiff has taken reasonable measures to keep the trade secrets secret, as it entered into the Agreement with Defendant, which requires Defendants to submit any intended to publication pertaining to the licensed inventions and technology to Plaintiff so that Plaintiff can designate any Confidential Information and request the deletion thereof. Plaintiff also entered into the MIPS Partnership Agreement with Defendant, in which Section 5.3 states “[a] receiving party will use reasonable efforts to prevent the disclosure of the other party’s Confidential Information to third parties, or use of Confidential Information for any purpose other than as contemplated by the Project, without the prior written consent of the disclosing party, for a period of three (3) years after the expiration of this Agreement.”

113. The trade secrets derive actual or potential independent economic value from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information, as the parties entered into the Agreement and the MIPS Partnership Agreement to ensure Plaintiff enjoyed exclusive use of the licensed inventions, and that confidential information would not be disclosed without Plaintiff’s consent, so that Plaintiff could develop licensed inventions and the Plaintiff would be able to market the end product without competitors using the licensed inventions and technology.

114. Defendants acquired the trade secrets under circumstances giving rise to a duty to maintain the secrecy or limit the use thereof, as Defendants were bound by the foregoing provisions of the Agreement and the MIPS Partnership Agreement. Additionally, as equity interest holders in Plaintiff, Defendants obtained access to Plaintiff's trade secrets in such a manner that they knew, or should have known, Plaintiff's trade secrets were confidential. Indeed, the Parties intended to develop and market the licensed inventions and technology, and any unauthorized disclosure of Plaintiff's trade secrets would undermine the commercial viability of licensed products and licensed services that relied upon the licensed technology.

115. Defendants, on a number of occasions, misappropriated the foregoing trade secrets, without Plaintiff's knowledge or express or implied consent, by making publications and disclosures to third parties where the publications directly referenced the trade secrets. Defendants misappropriated the trade secrets overseas to China, thereby diminishing the actual or potential economic value of the trade secrets to Plaintiff.

116. Defendants willfully and maliciously misappropriated the foregoing trade secrets. Indeed, Defendants deliberately failed to inform Plaintiff of the intended disclosures, thereby depriving Plaintiff of the ability to object to the disclosures of the trade secrets.

117. As a direct and proximate result of Defendants' misappropriation of trade secrets, Plaintiff has suffered damages for actual losses, unjust enrichment, and royalties.

WHEREFORE, Plaintiff prays for the relief stated below.

SEVENTH CAUSE OF ACTION

**(Misappropriation of Trade Secrets Pursuant to Md. Code, Comm. Law, § 11-1201 *et seq.*)
(Plaintiff v. All Defendants)**

118. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as though fully stated herein.

119. The scientific knowledge, know-how, processes, inventions, techniques, formulae, products, data, plans and software pertaining to the development of the licensed inventions and technology are “trade secrets” as defined in Md. Code Ann., Com. Law § 11-1201(e).

120. Plaintiff is the owner of the trade secrets as it expanded upon and continued to develop the know-how, processes, inventions, techniques, formulae, products, data, plan, improvements, and software pertaining to the licensed technology.

121. Plaintiff has taken reasonable measures to keep the trade secrets secret, as it entered into the Agreement with Defendant, which requires Defendants to submit any intended to publication pertaining to the licensed inventions to Plaintiff so that Plaintiff can designate any Confidential Information and request the deletion thereof. Plaintiff also entered into the MIPS Partnership Agreement with Defendant, in which Section 5.3 states “[a] receiving party will use reasonable efforts to prevent the disclosure of the other party’s Confidential Information to third parties, or use of Confidential Information for any purpose other than as contemplated by the Project, without the prior written consent of the disclosing party, for a period of three (3) years after the expiration of this Agreement.”

122. The trade secrets derive actual or potential independent economic value from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information, as the parties entered into the Agreement and the MIPS Partnership Agreement to ensure Plaintiff enjoyed exclusive use of the licensed inventions, and that Confidential Information would not be disclosed without Plaintiff’s consent, so that Plaintiff could develop licensed inventions and the

Parties would be able to market the end product without competitors using the licensed inventions developed by Plaintiff.

123. Defendants acquired the trade secrets under circumstances giving rise to a duty to maintain the secrecy or limit the use thereof, as Defendants were bound by the foregoing provisions of the Agreement and MIPS Partnership Agreement and the Parties intended to develop and market the licensed inventions. Additionally, as equity interest holders in Plaintiff, Defendants obtained access to Plaintiff's trade secrets in such a manner that they knew, or should have known, Plaintiff's trade secrets were confidential. Indeed, the Parties intended to develop and market the licensed inventions and technology, and any unauthorized disclosure of Plaintiff's trade secrets would undermine the commercial viability of licensed products and licensed services that relied upon the licensed technology.

124. Defendants, on a number of occasions, misappropriated the foregoing trade secrets, without Plaintiff's knowledge or express or implied consent, by making publications and disclosures to third parties where the publications directly referenced the trade secrets. Defendants misappropriated the trade secrets overseas to China for product development, thereby diminishing the actual or potential economic value of the trade secrets to Plaintiff.

125. Defendants willfully and maliciously misappropriated the foregoing trade secrets. Indeed, Defendants deliberately failed to inform Plaintiff of the intended disclosures, thereby depriving Plaintiff of the ability to object to the disclosures of the trade secrets.

126. As a direct and proximate result of Defendants' misappropriation of trade secrets, Plaintiff has suffered damages for actual losses, unjust enrichment, and royalties.

WHEREFORE, Plaintiff prays for the relief stated below.

EIGHTH CAUSE OF ACTION
(Unjust Enrichment)
(Plaintiff v. All Defendants)

127. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as though fully stated herein.

128. Plaintiff conferred a benefit onto Defendants by granting Defendants equity interests in Plaintiff in exchange for Defendants developing and commercializing the licensed inventions and technology.

129. Defendants knew and appreciated the foregoing benefit.

130. Defendants accepted and retained the foregoing benefit without developing or commercializing the licensed inventions and technology.

WHEREFORE, Plaintiff prays for the relief stated below.

NINTH CAUSE OF ACTION
(Tortious Interference with Contract)
(Plaintiff v. Defendant Yu and Defendant Bae)

131. Plaintiff repeats, realleges, and incorporates all preceding paragraphs, as though fully stated herein.

132. Plaintiff, Defendants UM, and Defendant USM are parties to the Agreement.

133. Defendant Yu and Defendant Bae knew of the existence of the Agreement.

134. Defendant Yu and Defendant Bae intentionally and willfully interfered with the contractual relationship between Plaintiff and Defendants by, *inter alia*, (i) falsely representing that they were successfully able to engineer a batch fabrication process to mass produce 400 of the licensed sensors; (ii) falsely representing that they had no additional work related to the licensed technology and to resolution of the issues with the licensed technology; (iii) causing

publication of Plaintiff's trade secrets; and (iv) misappropriated Plaintiff's trade secrets for their own personal benefit.

135. Defendant Yu and Defendant Bae took such actions without lawful purpose, but rather to cause Defendants UM and USM to breach the Agreement.

136. Plaintiff has suffered harm as a direct and proximate result of the joint and several actions of Defendant Yu and Defendant Bae, including, Plaintiff present and future losses and lost profits.

WHEREFORE, Plaintiff prays for the relief stated below.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays this Honorable Court:

A.) Declare and find that Defendants University of Maryland and University System of Maryland breached their obligations to MedSense LLC under a valid and legally binding contract, as described herein;

B.) Declare that Defendants shall fully compensate Plaintiff, MedSense LLC, for all of its damages incurred or to be incurred for each count in the Complaint, which damages are in excess of \$75,000, plus all reasonable attorneys' fees and costs;

C.) Award Plaintiff their costs and disbursements incurred in connection with this action, including reasonable attorneys' fees, expert witness fees, and other costs;

D.) Award damages in favor of Plaintiff and against Defendants, jointly and severally, for the actual losses caused by the misappropriation of trade secrets, losses which are in excess of \$75,000;

E.) Award damages in favor of Plaintiff and against Defendants, jointly and severally, for unjust enrichment caused by the misappropriation of trade secrets, damages which are in excess of \$75,000;

F.) Award damages in favor of Plaintiff and against Defendants, jointly and severally, caused by the misappropriation of trade secrets measured by imposition of liability for a reasonable royalty for Defendants; unauthorized disclosure or use of trade secrets, damages which are in excess of \$75,000;

G.) Award exemplary damages in favor of Plaintiff and against Defendants, jointly and severally, in an amount two times the amount of damages awarded pursuant to sections (D), (E), and (F) hereto for Defendants' willful and malicious misappropriation of trade secrets;

H.) Award costs, pre- and post-judgment interest, and reasonable attorney's fees;

I.) Rescission of Defendants' equity interests in Plaintiff; and

J.) Grant any and all such other and further relief as the Court deems just and proper.

Jury Demand

Plaintiff demands a jury on all issues so triable.

Respectfully submitted,

/s/ Gregory A. Dorsey
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